

**Extending the quality and quantity of pre-  
1854 data in a joint US/Europe effort**

**by**

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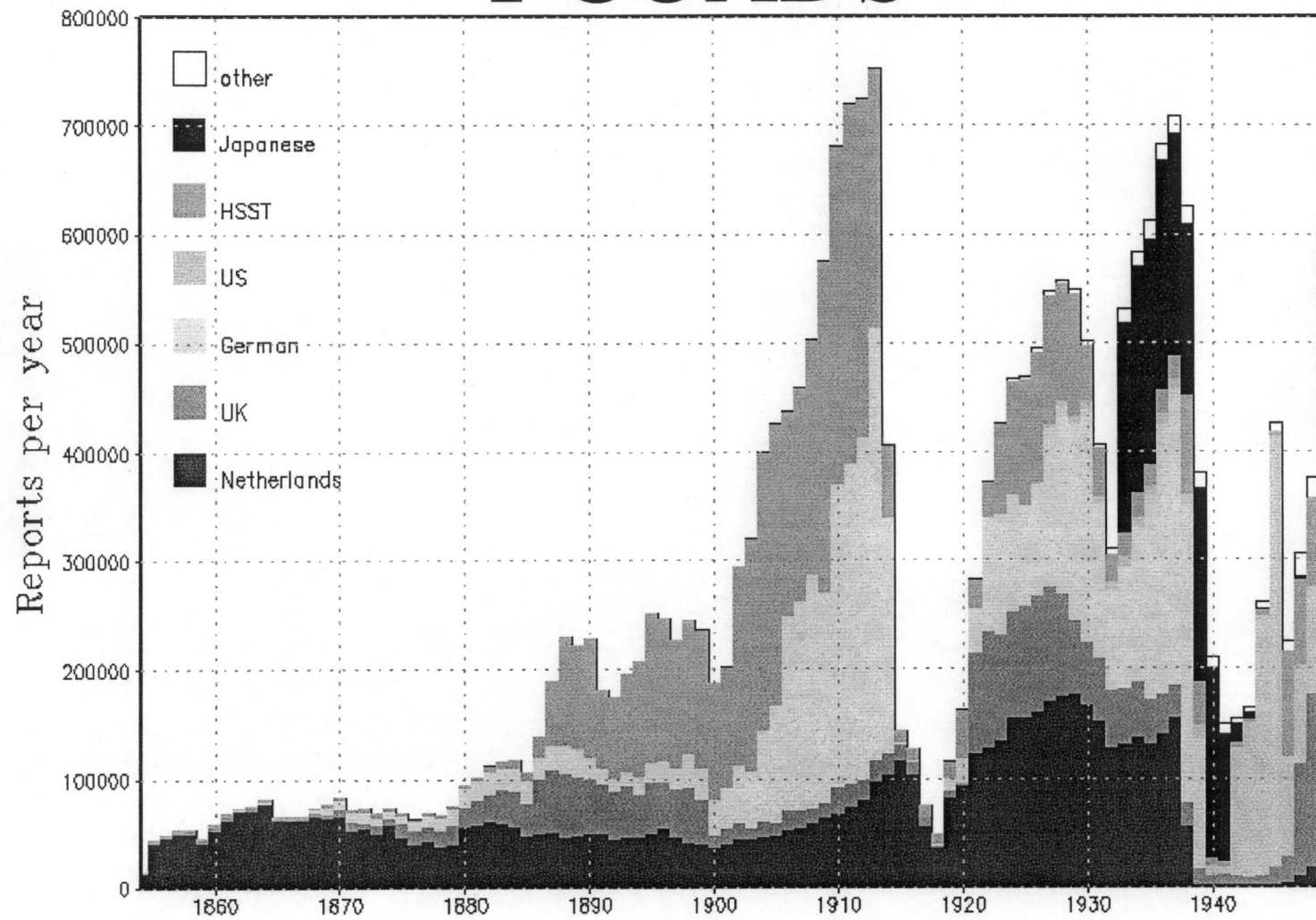
**Royal Netherlands Meteorological Institute,  
(KNMI), The Netherlands**

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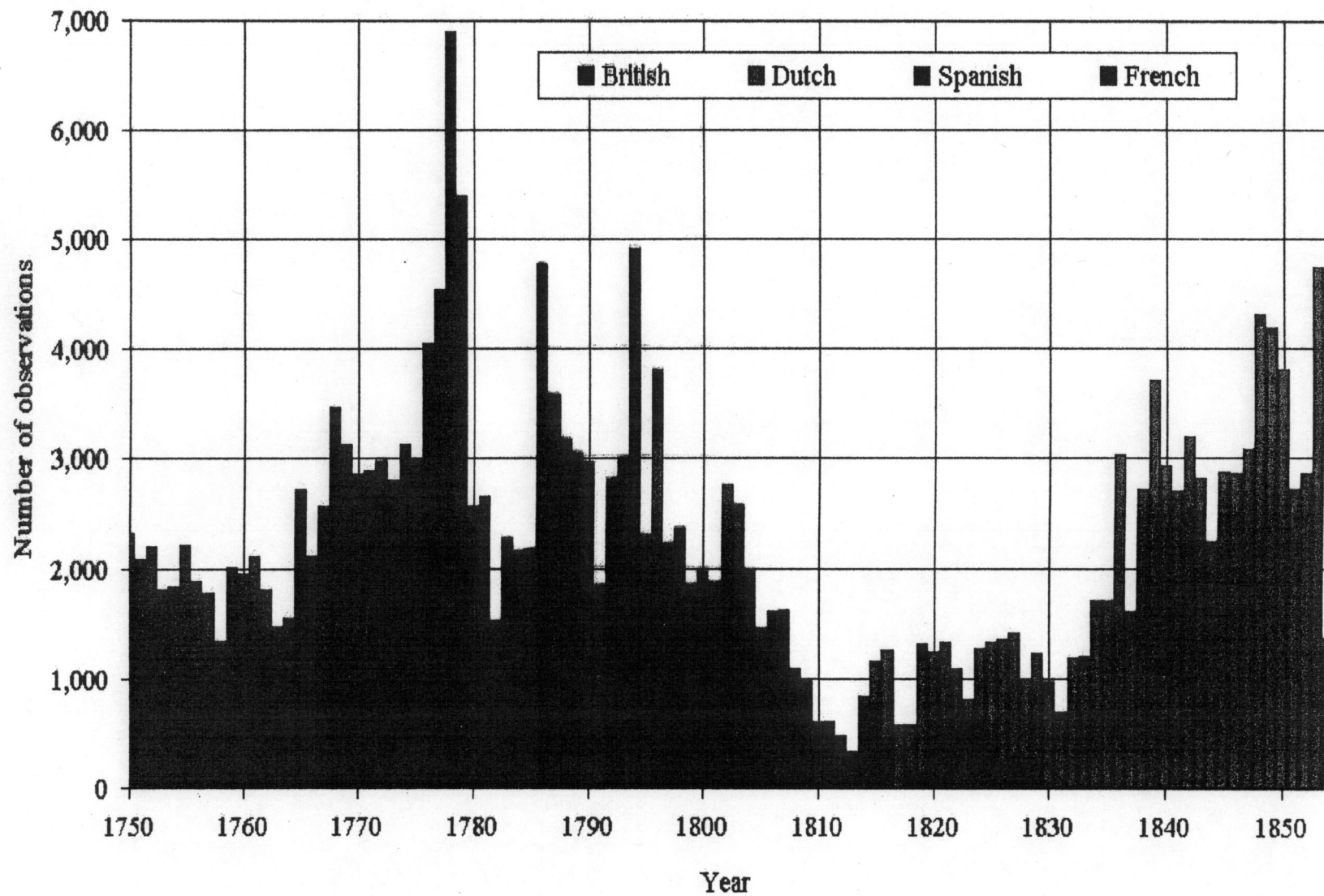
**Three topics:**

- 1. To digitize the 1750-1850 data that remain after completion of CLIWOC (UK/US/██████ option?)**
- 2. Post-analyzing Maury in the same way that was done in CLIWOC (“rationalizing” Maury);**
- 3. ICOADS/Maury/CLIWOC standardization including the subdaily issue (Release with noon-obs only)**

# I-COADS

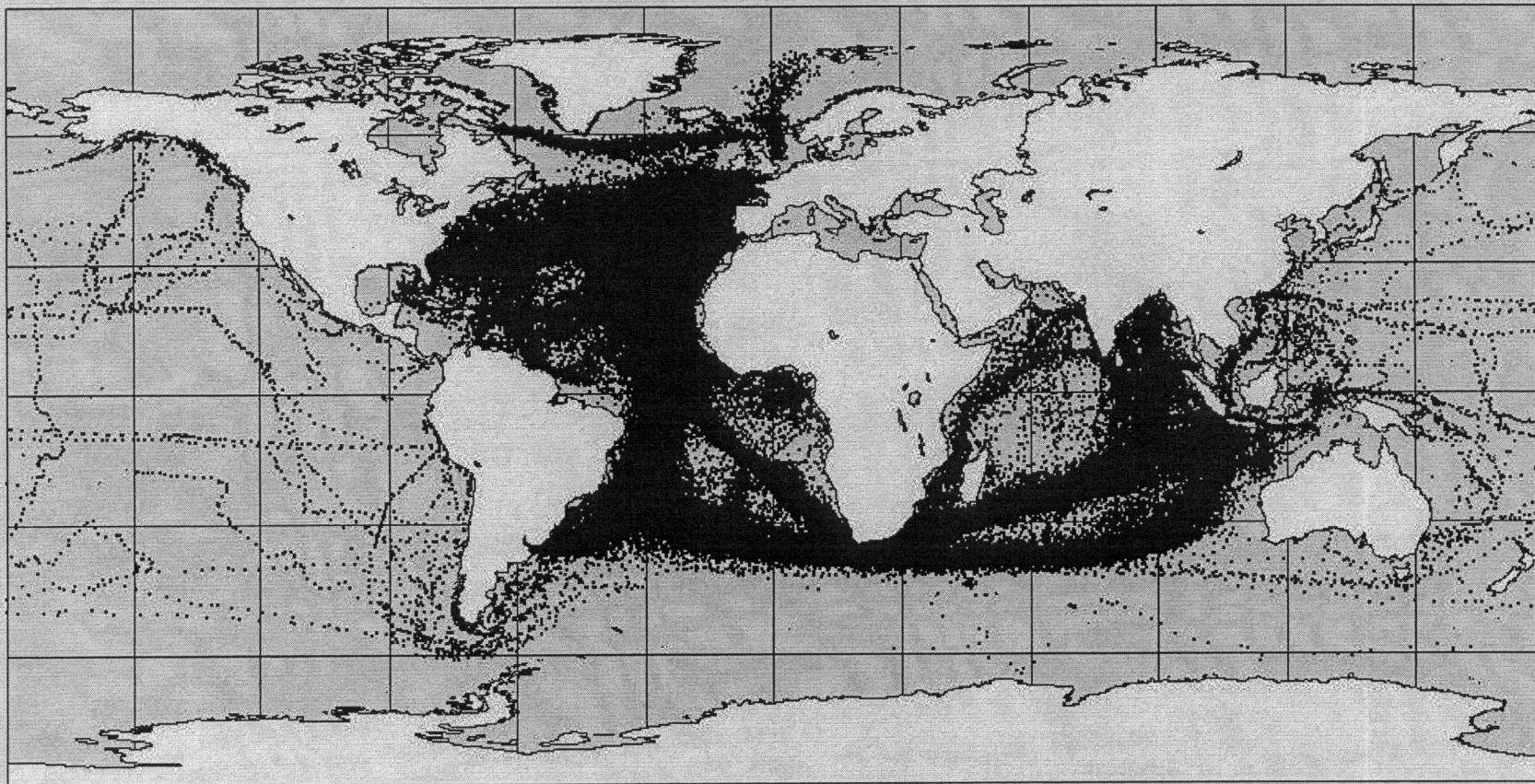


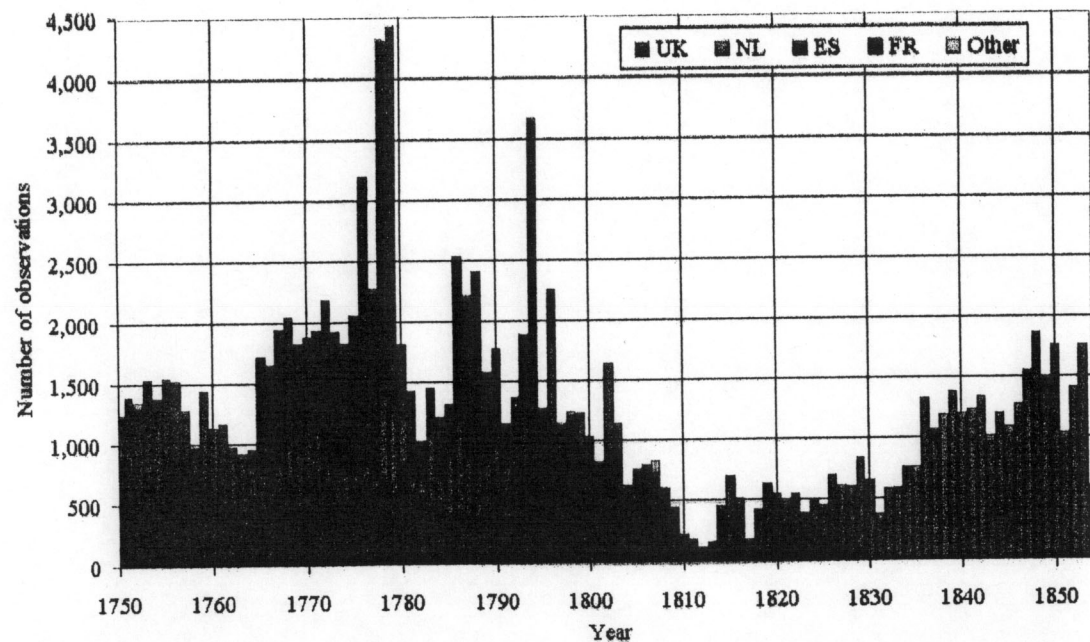
# CLIWOC data



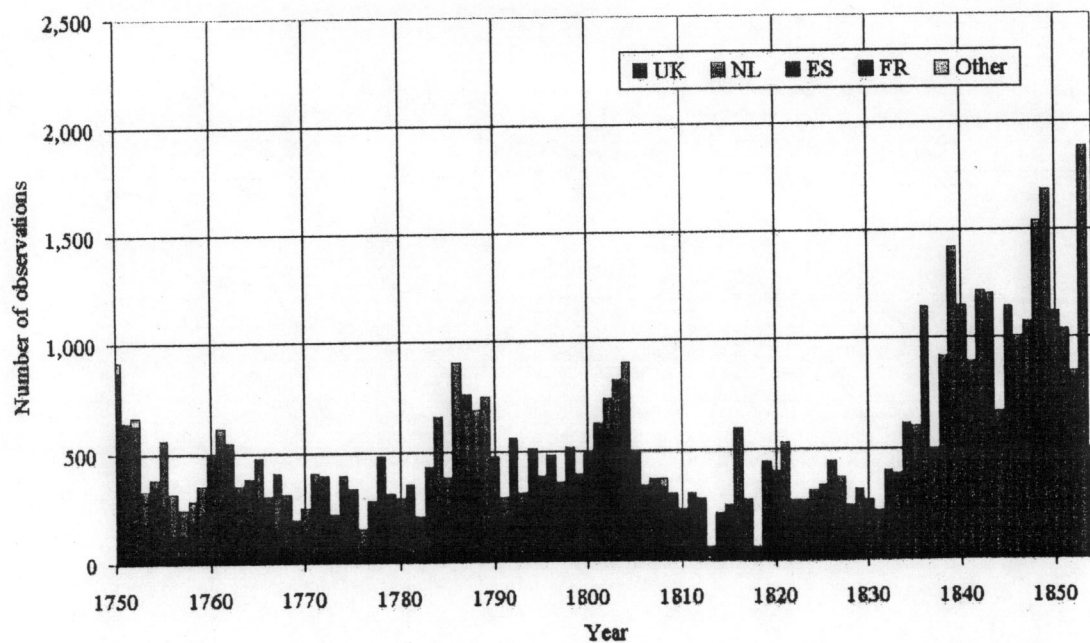


# Global coverage CLIWOC

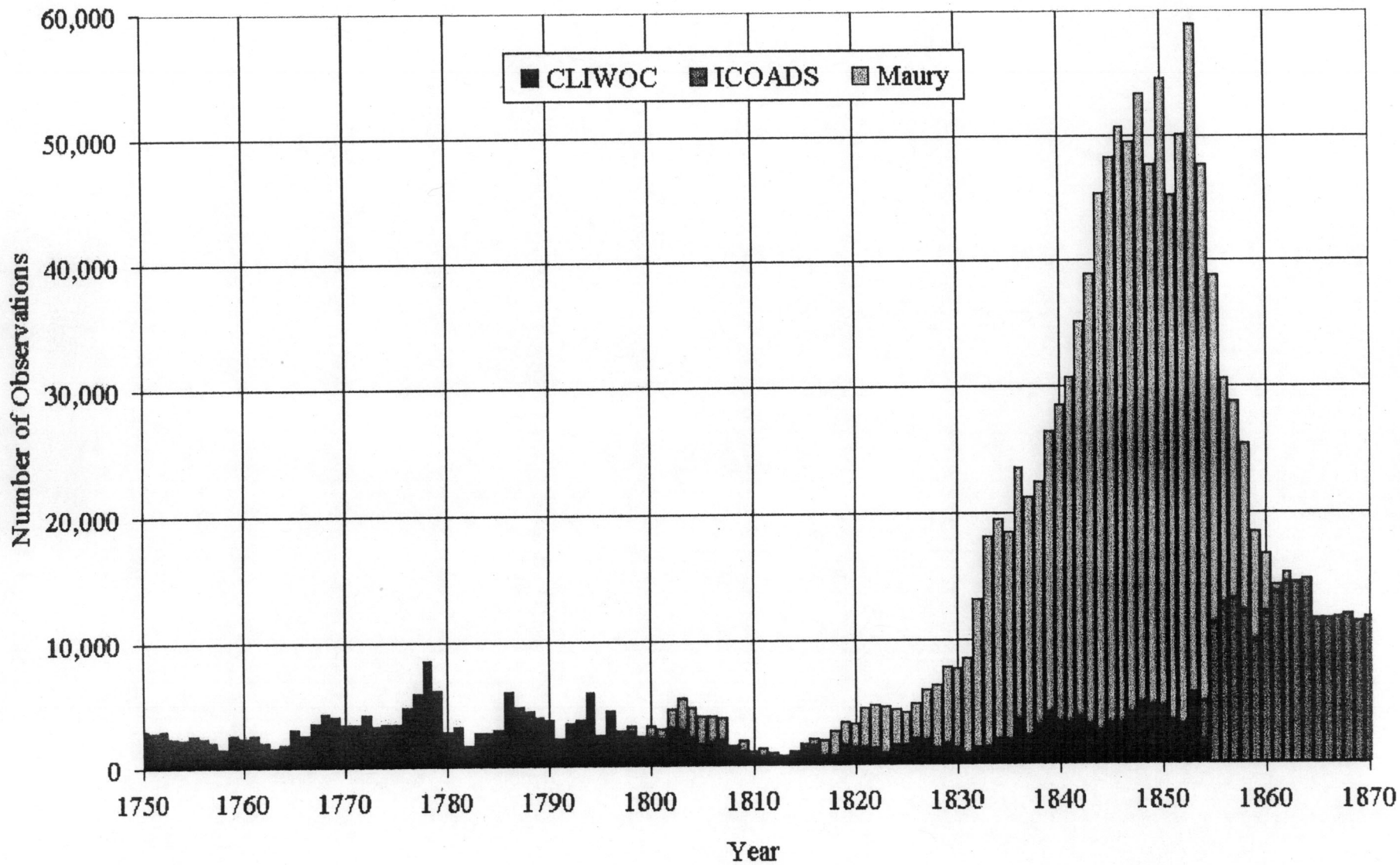




N-Atlantic Ocean



Indian Ocean

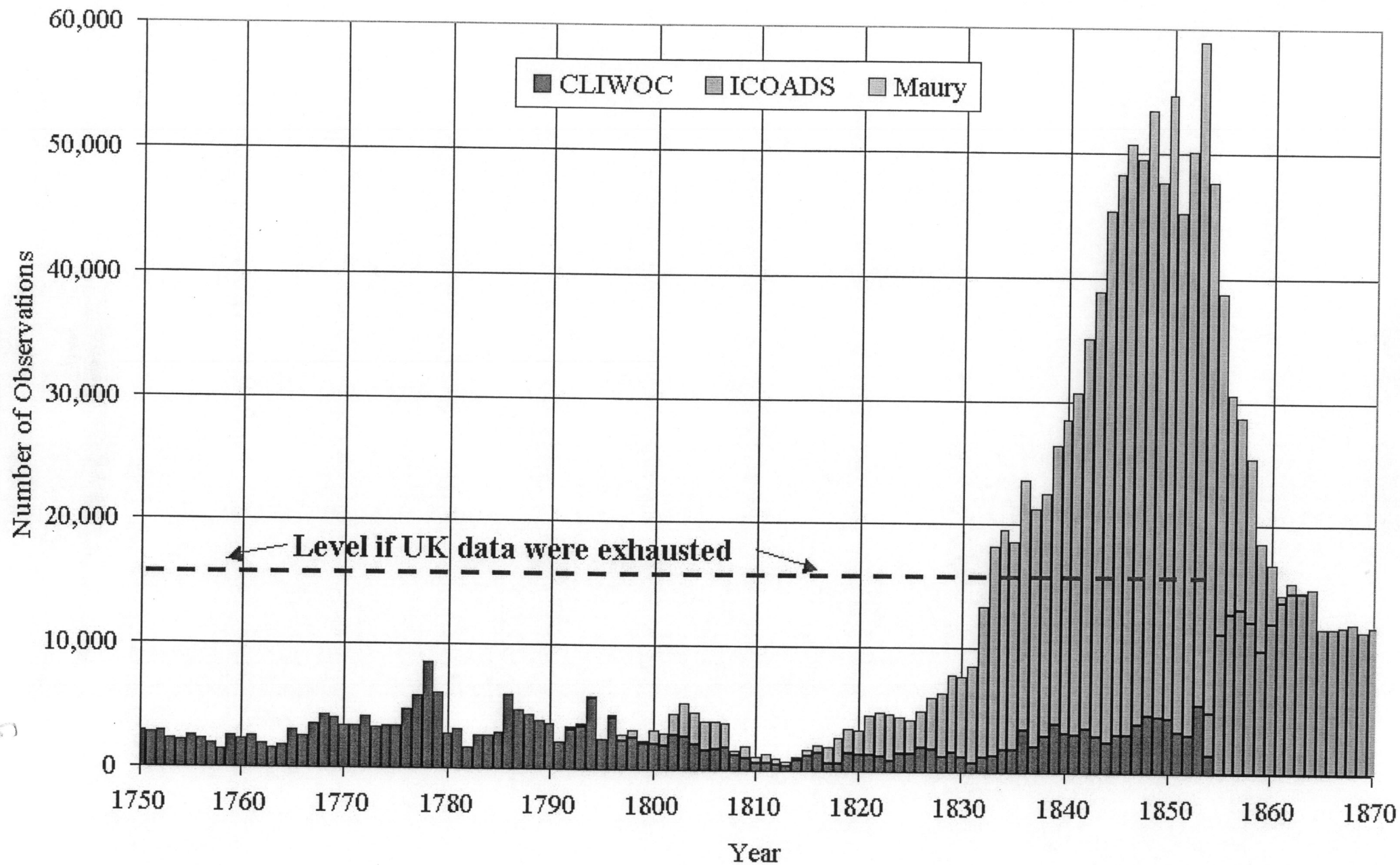


## POST CLIWOC

**Number of data in the US Maury collection and in the CLIWOC database at the completion of the EU CLIWOC project (Dec 2003)**

	country	main period	keyed data	data/yr	available	exhaustion	data/yr if exhausted
<b>Maury</b>	<b>US</b>	<b>1830-1860</b>	<b>1.5 M</b>	<b>50 k</b>	<b>1.5 M</b>	<b>100%</b>	<b>50 k</b>
<b>CLIWOC</b>	Es	1750-1800	0.1 M	2 k	0.1 M	100%	2 k
	NL	1750-1853	0.1 M	1 k	0.2 M	50%	2 k
	UK	1750-1850	0.1 M	1 k	1.4 M	7 %	14 k
	F	1750-1850	0.007 M	0.07k	0.5M	1 %	5 k
<b>TOTAL CLIWOC</b>	<b>Es/NL/UK/F</b>	<b>1750-1850</b>	<b>0.3 M</b>	<b>3 k</b>	<b>2.2 M</b>	<b>14 %</b>	<b>22 k</b>





*How to get it digitized?*

**NOT as EU project (Too few countries involved)**

***PROPOSAL:***

- 1. US-funded imaging of all available UK logbooks 1690-1854**
- 2. US-funded digitalizing of these UK data (emphasis on 1750-1854)**
- 3. NL-funded reprocessing of all Maury data by KNMI**

***Boundary Conditions in this option:***

- At this time no efforts in the direction of logbooks elsewhere in Europe (F, NL, or perhaps DK)**
- Digitizing post-1750 only (1690-1750 foreseen in a next stage)**

## Rationalizing Maury by NL

	priority	correction	magnitude	depending on
Wind conversion to speed	1	“dictionary”	~95% of reports	language
Pressure	2	temp	0 to -4 mb	latitude
		gravity	-4 to +4 mb	latitude
		ship heeling	0 to -4 mb	wind force
		ship rolling	0 to -4 mb	waves
Longitude, UTC	p.m.	checks	n.a.	zero meridians

*Miscellaneous:*

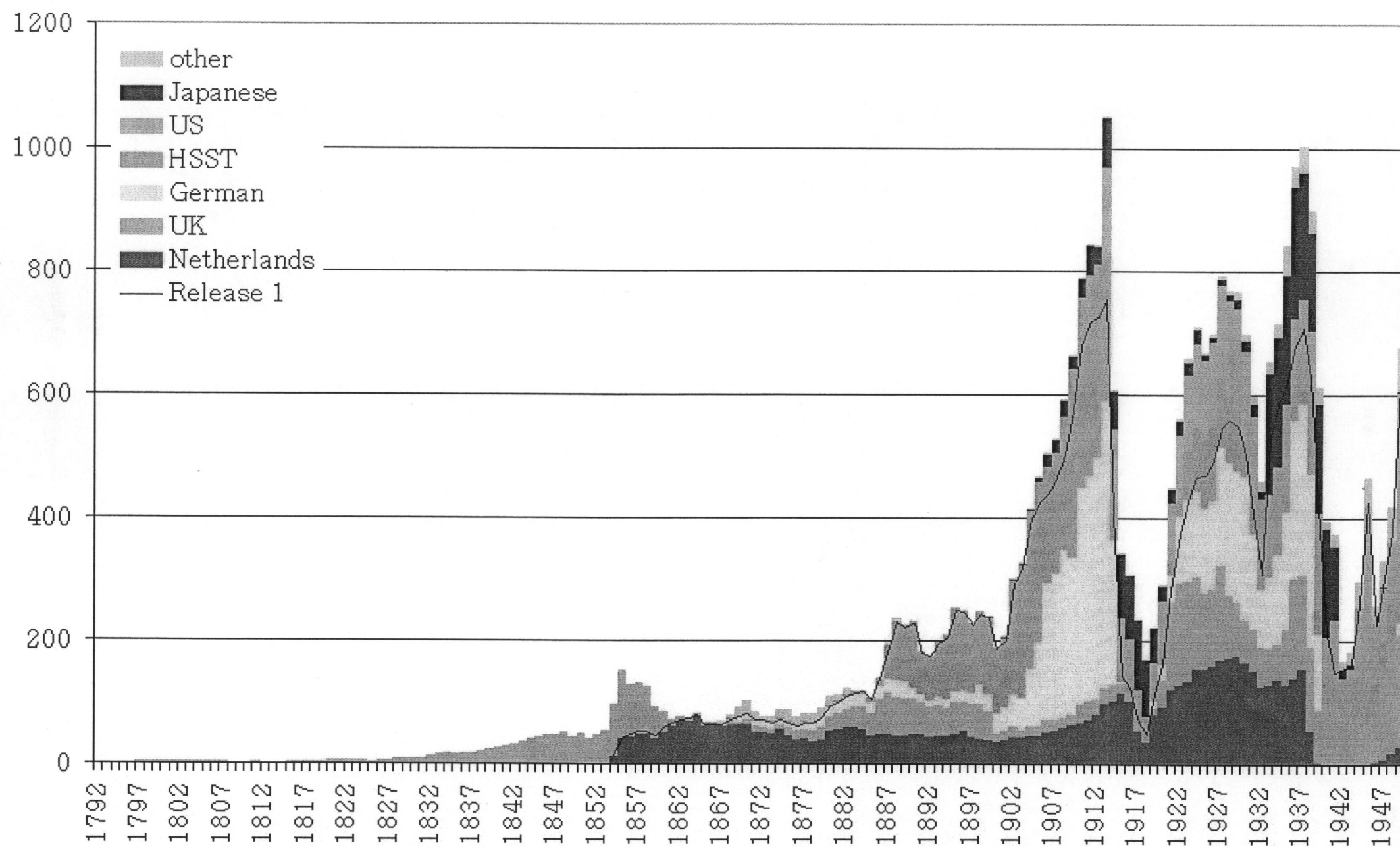
- **Daily or subdaily extension (see Maury plot)?**
- **Release of a noon-only version of ICOADS/CLIWOC/Maury**
- **Inner seas?**
- **Do we want to redo CLIWOC on sub daily basis**

*Alternative/parallel efforts*

- **Filling relative gaps in 1854-1950 ICOADS:**
  - **WWII (from UK; perhaps Ger, Rus?)**
  - **1854-1890 (also from UK)**
- **Digitizing 1690-1750**



Thousands



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Günther Köhnen

## CLIWOC Extension

Asheville 26-8-04

OV 1/ aankondiging

**Follow up from Brussels/Nice discussion**

- successful  
- quality should be extended by adding data  
to surpass quality of previous

OV 2/ Topics

Pre CLIWOC situation

OV3/ ICOADS grafiek

We found it unacceptable that nothing was digitized before 1853  
EU project

OV4/ CLIWOC aantal obs

3.5 European countries (F only marginal);  
virtually all great Naval countries of the time  
*Portugal; Except Danmark*

For practical reasons: NOON ONLY

OV5/ Global Coverage

- Little or no observations from the Pacific Ocean, but good coverage of the Atlantic and Indian Ocean
- Nearly 300.000 observations are available in the database

#### OV6/ coverage per ocean

- Two times more data for reconstructing NAO than for SOI
- Spanish contributed particularly in 18th century and Atlantic

where are we now(compared with the other databases):

#### OV 7/ CLIWOC/MAURY/ICOADS

##### ONCE A DAY

1. Extension of ICOADS by a full century,
2. But with (so far) four times less data density
3. Special place: Maury collection – not well meteorologically available; NB Maury is **MUCH** more than it looks from the usual subday ICOADS plots

##### EXHAUSTION

#### OV8/ TABEL MET UITPUTTING

Proposal: to complete 1750-1854 from the UK sources, brings pre-1854 up to the level of post-1854

#### OV 9/ CLIWOC/MAURY/ICOADS na aanvulling

But know, that Maury wind need postprocessing to bring their quality up to the CLIWOC level

#### OV 10/ DEAL

*Ervenig is don*